

***Remarks***

Reconsideration of this Application is respectfully requested.

Claims 1, 2, 4-7, 9-15, 17-22 and 24-27 are pending in the application, with claims 1, 6, 14 and 21 being the independent claims. Claims 3, 8, 16 and 23 were previously cancelled. Claims 1, 4, 6, 14, 17, 21, and 24 are sought to be amended. These changes introduce no new subject matter, and their entry is respectfully requested.

Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

***Rejections under 35 U.S.C. § 103***

**Claims 1, 4-6, 9, 10, 12-14, 17-21 and 24-27**

The Examiner has rejected claims 1, 4-6, 9, 10, 12-14, 17-21 and 24-27 under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 6,438,123 to Chapman (“Chapman”) in view of U.S. Patent No. 5,987,022 to Geiger (“Geiger”). For the reasons set forth below, Applicants respectfully traverse.

Independent claim 1, as amended herein, is directed to a cable modem for use in a Data Over Cable Service Interface Specification (DOCSIS) network that includes:

- a media access control;
- a receiver portion coupled to said media access control; and
- a transmitter portion coupled to said media access control;

wherein said media access control is adapted to generate a DOCSIS registration message that indicates support for a plurality of protocol-specific header suppression techniques by the cable modem and wherein said transmitter portion is adapted to transmit said DOCSIS registration message to a cable modem termination;

wherein said receiver portion is adapted to receive a response to said DOCSIS registration message from said cable modem termination system and to provide said response to said DOCSIS registration message to said media access control, said response to said DOCSIS\_registration message indicating whether or not said plurality of protocol-specific header suppression techniques is supported by a cable modem termination system; and

wherein said media access control is further adapted to format data for transmission to said cable modem termination system in accordance with a selected one of said plurality of protocol-specific header suppression techniques if said response to said DOCSIS registration message indicates said plurality of protocol-specific header suppression techniques is supported by said cable modem termination system, and to format data for transmission to said cable modem termination system in accordance with a default header suppression technique if said response to said DOCSIS registration message indicates said plurality of protocol-specific header suppression techniques are not supported by said cable modem termination system.

Chapman does not teach or suggest each of the foregoing features of claim 1. For example, Chapman does not teach or suggest generating "a DOCSIS registration message that indicates support for a plurality of protocol-specific header suppression techniques" as recited in claim 1. Chapman teaches the use of only a single header suppression technique: namely, the suppression of Ethernet, UDP and IP headers in a flow of RTP packets corresponding to a Voice over Internet Protocol (VoIP) phone call. *See* Chapman, col. 4, ll. 29-44. As such, Chapman cannot "generate a DOCSIS registration message that indicates support for a plurality of protocol-specific header suppression techniques," since any registration message generated in accordance with the teachings of Chapman can only include support for the single form of header suppression taught by Chapman.

Geiger does not provide this missing teaching. Geiger discloses a transmitter in a generic data communication system that selectively applies one of three header compression techniques to a packet to be transmitted depending on a packet type

identifier and a protocol identifier included in the packet. *See* Geiger, FIG. 4 and accompanying text. However, Geiger is silent as to how such a technique could be implemented in a DOCSIS network. Further, Geiger does not teach or suggest sending a message from a cable modem (or any device) indicating support for multiple techniques. Accordingly, Geiger does not teach or suggest generating "a DOCSIS registration message that indicates support for a plurality of protocol-specific header suppression techniques" as recited in claim 1.

Moreover, persons skilled in the art would not be motivated to combine the teachings of Chapman and Geiger, since conventional DOCSIS technology as represented by Chapman does not provide a mechanism for using multiple alternative header suppression techniques. As set forth in the background section of the present application:

Heretofore, the use of proprietary data transfer protocols that extend beyond those provided by the DOCSIS specification have been avoided. This is due, in part, to the fact that the DOCSIS specification does not provide a mechanism for using alternative protocols in a cable modem system. For example, the DOCSIS specification does not provide a mechanism for the use of data packet formats other than those it provides. Moreover, because conventional CMTS and cable modem devices have been designed in accordance with the DOCSIS specification, the use of extended protocols has been avoided to ensure interoperability between individual cable modem system components. For example, conventional DOCSIS-compliant CMTS equipment is incapable of differentiating between standard DOCSIS traffic and traffic transmitted in accordance with an extended protocol.

*See* Specification at paragraph [0021].

Since neither Chapman nor Geiger, alone or in combination, teach or suggest each and every feature of independent claim 1, the combination of Chapman and Geiger fails to support a *prima facie* obviousness rejection of that claim. Accordingly, the Examiner's rejections of claim 1 under 35 U.S.C. § 103(a) is traversed and Applicants

respectfully request that the rejections be reconsidered and withdrawn. Dependent claims 4-5 are also not rendered obvious by this combination for at least the same reasons as independent claim 1 from which they depend and further in view of their own respective features. Accordingly, the Examiner's rejections of claims 4-5 under 35 U.S.C. § 103(a) are likewise traversed and Applicants respectfully request that these rejections be reconsidered and withdrawn.

Independent claim 6, as amended herein, is directed to a cable modem termination system (CMTS) for use in a DOCSIS network. As noted above in regard to claim 1, neither Chapman nor Geiger teaches or suggests a "DOCSIS registration message designating support for a plurality of protocol-specific header suppression techniques" as recited by claim 6. Moreover, as noted above in regard to claim 1, one skilled in the art would not be motivated to combine the teachings of Chapman and Geiger since conventional DOCSIS technology as represented by Chapman does not provide a mechanism for using multiple alternative header suppression techniques.

Since neither Chapman nor Geiger, alone or in combination, teach or suggest each and every feature of independent claim 6, the combination of Chapman and Geiger fails to support a prima facie obviousness rejection of that claim. Accordingly, the Examiner's rejections of claim 6 under 35 U.S.C. § 103(a) is traversed and Applicants respectfully request that the rejections be reconsidered and withdrawn. Dependent claims 9-10 and 12-13 are also not rendered obvious by this combination for at least the same reasons as independent claim 6 from which they depend and further in view of their own respective features. Accordingly, the Examiner's rejections of claims 9-10 and 12-13 under 35 U.S.C. § 103(a) are likewise traversed and Applicants respectfully request that these rejections be reconsidered and withdrawn.

Independent claim 14, as amended herein, is directed to a method for transferring data between a cable modem and a cable modem termination system in a DOCSIS network. As noted above in regard to claim 1, neither Chapman nor Geiger teaches or suggests a DOCSIS registration message that "indicates support for a plurality of protocol-specific header suppression techniques" as recited by claim 14. Moreover, as noted above in regard to claim 1, one skilled in the art would not be motivated to combine the teachings of Chapman and Geiger since conventional DOCSIS technology as represented by Chapman does not provide a mechanism for using multiple alternative header suppression techniques.

Since neither Chapman nor Geiger, alone or in combination, teach or suggest each and every feature of independent claim 14, the combination of Chapman and Geiger fails to support a prima facie obviousness rejection of that claim. Accordingly, the Examiner's rejections of claim 14 under 35 U.S.C. § 103(a) is traversed and Applicants respectfully request that the rejections be reconsidered and withdrawn. Dependent claims 17-20 are also not rendered obvious by this combination for at least the same reasons as independent claim 14 from which they depend and further in view of their own respective features. Accordingly, the Examiner's rejections of claims 17-20 under 35 U.S.C. § 103(a) are likewise traversed and Applicants respectfully request that these rejections be reconsidered and withdrawn.

Independent claim 21, as amended herein, is directed to a method for data transfer in a DOCSIS network. As noted above in regard to claim 1, neither Chapman nor Geiger teaches or suggests a "DOCSIS registration message designates support for a plurality of protocol-specific header suppression techniques" as recited by claim 21. Moreover, as noted above in regard to claim 1, one skilled in the art would not be

motivated to combine the teachings of Chapman and Geiger since conventional DOCSIS technology as represented by Chapman does not provide a mechanism for using multiple alternative header suppression techniques.

Since neither Chapman nor Geiger, alone or in combination, teach or suggest each and every feature of independent claim 21, the combination of Chapman and Geiger fails to support a *prima facie* obviousness rejection of that claim. Accordingly, the Examiner's rejections of claim 21 under 35 U.S.C. § 103(a) is traversed and Applicants respectfully request that the rejections be reconsidered and withdrawn. Dependent claims 24-27 are also not rendered obvious by this combination for at least the same reasons as independent claim 21 from which they depend and further in view of their own respective features. Accordingly, the Examiner's rejections of claims 24-27 under 35 U.S.C. § 103(a) are likewise traversed and Applicants respectfully request that these rejections be reconsidered and withdrawn.

**Claims 2, 7, 15 and 22**

The Examiner has rejected claims 2, 7, 15 and 22 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Chapman and Geiger as applied to independent claim 1, and further in view of U.S. Patent No. 6,788,707 to Horton, Jr. *et al.* ("Horton"). For the reasons set forth below, Applicants respectfully traverse.

Independent claim 1 recites "a DOCSIS registration message that indicates support for a plurality of protocol-specific header suppression techniques." As noted above with respect to claim 1, Chapman and Geiger, alone or in combination, do not teach or suggest this feature. Horton adds nothing to the teachings of Chapman and Geiger to overcome the deficiencies of these references. Claim 2 depends from claim 1. For at least the reasons provided above with respect to claim 1, claim 2 is patentable over

Chapman, Geiger, and Horton, alone or in combination. Accordingly, Applicants respectfully request that the rejection of claim 2 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Independent claim 6 recites a "DOCSIS registration message designating support for a plurality of protocol-specific header suppression techniques." As noted above with respect to claim 6, Chapman and Geiger, alone or in combination, do not teach or suggest this feature. Horton adds nothing to the teachings of Chapman and Geiger to overcome the deficiencies of these references. Claim 7 depends from claim 6. For at least the reasons provided above with respect to claim 6, claim 7 is patentable over Chapman, Geiger, and Horton, alone or in combination. Accordingly, Applicants respectfully request that the rejection of claim 7 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Independent claim 14 recites a DOCSIS registration message that "indicates support for a plurality of protocol-specific header suppression techniques." As noted above with respect to claim 14, Chapman and Geiger, alone or in combination, do not teach or suggest this feature. Horton adds nothing to the teachings of Chapman and Geiger to overcome the deficiencies of these references. Claim 15 depends from claim 14. For at least the reasons provided above with respect to claim 14, claim 15 is patentable over Chapman, Geiger, and Horton, alone or in combination. Accordingly, Applicants respectfully request that the rejection of claim 15 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Independent claim 21 recites a "DOCSIS registration message designates support for a plurality of protocol-specific header suppression techniques." As noted above with respect to claim 21, Chapman and Geiger, alone or in combination, do not teach or

suggest this feature. Horton adds nothing to the teachings of Chapman and Geiger to overcome the deficiencies of these references. Claim 22 depends from claim 21. For at least the reasons provided above with respect to claim 21, claim 22 is patentable over Chapman, Geiger, and Horton, alone or in combination. Accordingly, Applicants respectfully request that the rejection of claim 22 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

### **Claim 11**

The Examiner has rejected claim 11 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Chapman and Geiger as applied to independent claim 6 and further in view of U.S. Patent No. 6,765,925 to Sawyer *et al.* ("Sawyer"). For the reasons set forth below, Applicants respectfully traverse.

Independent claim 6 recites a "DOCSIS registration message designating support for a plurality of protocol-specific header suppression techniques." As noted above with respect to claim 6, Chapman and Geiger, alone or in combination, do not teach or suggest this feature. Sawyer adds nothing to the teachings of Chapman and Geiger to overcome the deficiencies of these references. Claim 11 depends from claim 6. For at least the reasons provided above with respect to claim 6, claim 11 is patentable over Chapman, Geiger, and Sawyer, alone or in combination. Accordingly, Applicants respectfully request that the rejection of claim 11 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.



***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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